

What is claimed is:

1. A control circuit for an electromagnetic operating mechanism, in particular, for the operating mechanism of an electromagnetic switching device, comprising
  - first electronic switching means (16) whose output is connected in series with the operating coil (4) and which are activated for the duration of the pickup phase of the operating mechanism after a control voltage ( $U_e$ ) has been applied via a timer (12),
  - second electronic switching means (22) whose switching path is placed in series with the operating coil (4) and which are turned on while the control voltage ( $U_e$ ) is present,
 wherein
  - a rectifier circuit (8) connected to a control input (6) supplies at its output a smoothed operating voltage ( $U_b$ ),
  - a step-down d.c. voltage converter (10) downstream of the rectifier circuit (8) supplies at its output a smoothed holding voltage ( $U_h$ ),
  - the timer (12) is activated by ramping up the operating voltage ( $U_b$ ),
  - a voltage source (14) which is controllable by the timer (12) activates the first switching means (16) by a pickup voltage ( $U_a$ ),
  - the first switching means (16), which are designed as a voltage follower, and the series circuit which is composed of the operating coil (4) and the switching path of the second switching means (22) and is connected to the output of the first electronic switching means, are supplied with the operating voltage ( $U_b$ ), and
  - the output of the d.c. voltage converter (10), via a forward biased isolation diode (24), the output of the first switching means (16), and the control input of the second of the second switching means (22) are interconnected.
2. The control circuit as recited in Claim 1,
 

wherein the timer (12) is designed as an integrating RC element (34, 36, 38).
3. The control circuit as recited in Claim 1,
 

wherein the timer (12) is designed as a differentiating RC element.
4. The control circuit as recited in Claim 2 or 3,
 

wherein the RC element (34, 36, 38) is combined with a voltage-limiting device (42).

5. The control circuit as recited in one of the preceding claims,  
wherein the voltage source (14) includes a voltage-limiting circuit (48, 50) which is  
supplied with the operating voltage ( $U_b$ ) and whose output is operatively connected to  
the switching path of a threshold circuit (52 ... 60) which is connected on the input side  
to the timer (12).
6. The control circuit as recited in one of the preceding claims,  
wherein a free-wheeling means (86) is placed in parallel with the switching path of the  
second switching means (22).